A ROTATIONAL STUDY OF ALAALA DIPEPTIDE

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The solid AlaAla dipeptide (m.p. 285ºC) has been placed in the gas phase by laser ablation and studied using a chirped-pulse Fourier-transform microwave (LA-CP-FTMW) and molecular-beam Fourier-transform micro-wave (LA-MB-FTMW) spectroscopies. Two rotamers have been identified through their rotational and nuclear quadrupole coupling constants. The two conformers are stabilized by a different type of intramolecular interactions forming closing five- and seven-membered ring configurations. Additionally, conformer interconversion gives rise to missing conformers in the conformational landscape.

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